

ABSTRACT

METHOD FOR TESTING AN INTEGRATED CIRCUIT  
INCLUDING HARDWARE AND/OR SOFTWARE  
PARTS HAVING A CONFIDENTIAL NATURE

This method uses a tester (T) capable of being connected to an integrated circuit (CI) to be tested.

5 A random number (RNG-C) is generated and ciphered using a key (k) by a cipher algorithm to obtain a password ( $G_k(\text{RNG})\text{-C}$ ). The random number (RNG-C) is sent to the tester (T) in which the received random number (RNG-C) is ciphered using the same key (k) by a same cipher algorithm to generate therein a second password ( $G_k(\text{RNG})\text{-T}$ ). This latter is sent to the integrated circuit (CI) to be compared to the first password ( $G_k(\text{RNG})\text{-C}$ ). The test of the confidential parts (1) of the circuit is only authorised if the two passwords exhibit the required match.

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Figure 1